

I CLAIM:

1. An apparatus for producing a vacuum, comprising:
 - 5 a closed vessel having a gas inlet means, liquid inlet means and liquid outlet means;
 - an open vessel, arranged in vertical spaced relationship below said closed vessel, and having liquid inlet means, gas outlet means and liquid outlet means;
 - 10 tubular means between said liquid outlet means in said closed vessel and said liquid inlet means in said open vessel so as to provide a fluid flowpath therebetween;
 - 15 pump means between said liquid outlet means in said open vessel and said liquid inlet means in said closed vessel arranged so as to circulate liquid from said open vessel to said closed vessel; and
 - aerator means in said closed vessel arranged so as to entrain gas from said gas inlet means in said liquid flowing in said fluid flowpath between said closed vessel and said open vessel.
2. An apparatus as claimed in claim 1 wherein said tubular means
- 20 comprises a pipe in the range 20-40 feet long.
3. An apparatus as claimed in claim 2 wherein said pump means is driven by a motor in the range of 12-15HP.

4. An apparatus as claimed in claim 1 wherein said liquid is water and said gas is air.
5. A method for creating a vacuum comprising:
- providing a closed vessel having a gas inlet means, liquid inlet means and liquid outlet means;
- an open vessel, arranged in vertical spaced relationship below said closed vessel, and having liquid inlet means, gas outlet means and liquid outlet means; tubular means between said liquid outlet means in said closed vessel and said liquid inlet means in said open vessel so as to provide a fluid flowpath therebetween;
- 10 pump means between said liquid outlet means in said open vessel and said liquid inlet means in said closed vessel arranged so as to circulate liquid from said open vessel to said closed vessel; and
- aerator means in said closed vessel arranged so as to entrain gas from said gas inlet means in said liquid flowing in said fluid flowpath between said closed vessel and said open vessel;
- 15 operating said pump means so as to raise liquid from said open vessel to a level adjacent an upper end of said aerator means and circulate liquid through said fluid flowpath;
- 20 opening said gas inlet means so as to admit gas to said aerator means and thereby become entrained in said liquid flowing in said fluid flowpath; and releasing said entrained gas from said open vessel.

6. A method as claimed in claim 5 wherein said liquid is water and said gas is air.